WHAT IS CLAIMED IS:

1. An opto-electronic package facilitating the passive alignment of VCSELs to waveguides; said package comprising:

a core bearing a first surface;

a first cladding layer positioned on said first surface of said core;

a contact pad positioned on at least a position of the surface of said first cladding layer;

a second cladding layer located on a further surface position of said first cladding layer;

a waveguide channel being positioned in said second cladding layer; and

optical means being in optical communication with said waveguide channel in said second cladding layer and in electrical connection with said contact pad on said first cladding layer.

2. An opto-electronic package as claimed in Claim 1, wherein said first and second cladding layers are each comprised of an organic material.

3. An opto-electronic package as claimed in Claim 1, wherein a transmitter/receiver chip is coupled to said surface of said second cladding layer.

4. An opto-electronic package as claimed in Claim 3, wherein said transmitter/receiver chip is coupled to said surface of said second cladding layer through the interposition of C4-joints.

5. An opto-electronic package as claimed in Claim 4, wherein said core comprises a low expansion material approaching the coefficient of thermal expansion of the chip so as to reduce and minimize strains encountered in the C-4 joints.

6. An opto-electronic package as claimed in Claim 5, wherein said core material is selected from the group of materials consisting of epoxy glass composites, utilizing thick yarns and low expansion s-glass with a CTE of as low as 10 ppm/°C.

7. An opto-electronic package as claimed in Claim 5, wherein an index-matched adhesive couples said second cladding layer directly to said transmitter/receiver chip, and extends between said optical means and waveguide channel.

8. An opto-electronic package as claimed in Claim 1, wherein said second cladding layer has an integrated chip with optical inputs and outputs mounted on the surface of said cladding layer.

9. An opto-electronic package as claimed in Claim 1, wherein said package comprises a constituent of a printed circuit board providing for the precise alignment of VCSELs to waveguides.

10. An opto-electronic package as claimed in Claim 1, wherein said package comprises a constituent of an opto-electronic card providing for the passive alignment of VCSELs to waveguides.

11. A method of producing an opto-electronic package facilitating the passive alignment of VCSELs to waveguides; said method comprising:

providing a core having a first surface;

positioning a first cladding layer on said first surface of said core;

arranging a contact pad on at least a portion of the surface of said first cladding layer;

locating a second cladding layer on a further surface portion of said first cladding layer;

positioning a waveguide channel in said second cladding layer; and

providing optical means in optical communication with said waveguide channel in said second cladding layer and in electrical connection with said contact pad on said first cladding layer.

12. A method as claimed in Claim 11, wherein said first and second cladding layers are each comprised of an organic material.

13. A method as claimed in Claim 11, wherein a transmitter/receiver chip is coupled to said surface of said second cladding layer.

14. A method as claimed in Claim 13, wherein said transmitter/receiver chip is coupled to said surface of said second cladding layer through the interposition of C4-joints.

15. A method as claimed in Claim 14, wherein said core comprises a low expansion material approaching the coefficient of thermal expansion of the chip so as to reduce and minimize strains encountered in the C4 joints.

16. A method as claimed in Claim 15, wherein said core material is selected from the group of materials consisting of epoxy glass composites, utilizing thick yarns and low expansion S-glass with a CTE of as low as 10 ppm/°C.

17. A method as claimed in Claim 15, wherein an index-matched adhesive couples said second cladding layer directly to said transmitter/receiver chip, and extends between said optical means and waveguide channel.

18. A method as claimed in Claim 11, wherein an integrated chip with optical inputs and outputs is mounted on the surface of said second cladding layer.

19. A method as claimed in Claim 11, wherein said package comprises a constituent of a printed circuit board providing for the precise alignment of VCSELs to waveguides.

20. A method as claimed in Claim 11, wherein said package comprises a constituent of an opto-electronic card providing for the passive alignment of VCSELs to waveguides.

21. An opto-electronic package for alignment of a VCSEL to a waveguide, said package comprising:

a first dielectric layer;

a first signal conductor on said first dielectric layer;

a second dielectric layer overlying said first signal conductor and exposed portions of said first dielectric layer;

an optical waveguide within and parallel to said second dielectric layer;

a third dielectric layer on said second dielectric layer for mounting an optical device; and wherein:

there is an opening through said third dielectric layer to permit an optical path between said optical device and said waveguide; and

there is an opening through said second and third dielectric layers to permit an electrical connection of said optical device to said first signal conductor.

22. An opto-electronic package, as set forth in Claim 1, wherein said third dielectric layer includes pads for solder balls to mount said optical device.

23. An opto-electronic package, as set forth in Claim 1, wherein said first signal conductor includes a pad for a solder ball to mount said optical device.